

## WHAT IS CLAIMED IS:

1. A method for correcting exposure non-uniformities in a printbar having a plurality of individual LEDs, said method comprising:

5       calibrating said printbar by determining a first set of correction values for each corresponding one of the individual LEDs, storing said first set of correction values and a plurality of sets of correction values in a correction memory, each said correction value being a digital value for causing output of light of a substantially predetermined light intensity from the corresponding one of said individual LEDs;

10       measuring the light intensity from a predetermined set of individual LEDs of said printbar,

      comparing said measured light intensity with a uniform light intensity, determining a difference between said measured light intensity and said uniform light intensity, and

15       loading one of said plurality of sets of correction values into said printbar, when the determined difference between said measured light intensity and said uniform light intensity exceeds a predetermined maximum difference.

2. The method for correcting exposure non-uniformities in a printbar having a plurality of individual LEDs of claim 1, further comprising the steps of:

20       forming digital signals from the driving current of said LEDs of said printbar, shuffling said digital signals, and driving said predetermined set of individual LEDs with said shuffled digital signals.

3. The method for correcting exposure non-uniformities in a printbar having a plurality of individual LEDs of claim 1, further comprising the steps of:

25       up/down counting a line of data for said printbar from a preloaded midrange to form digital signals,

      scaling and quantizing said digital signals, shuffling said scaled quantized digital signals, and

30       driving said predetermined set of individual LEDs with said shuffled digital signals.

4. An LED printbar comprising:

a plurality of individual LEDs; said plurality of individual LEDs having a first plurality of LEDs to image a photoreceptor and a second plurality of LEDs to image a photodetector, said first plurality of LEDs being larger in number than said second plurality of LEDs;

a current driver having a control input, said current driver for applying a drive current to said plurality of individual LEDs, wherein first drive current is controlled by said control input;

a correction memory for storing a plurality of sets of correction values, said correction memory for applying one of said sets of correction value to said control input;

sensing means for comparing the light output from said second plurality of LEDs at said photodetector to a predetermined light output for loading the appropriate one of said plurality of sets of correction values from said correction memory to said control input.

5. The LED printbar of claim 4 wherein said sensing means comprise

an A/D converter to digital said drive current, and

a shuffler to shuffle said digital signals before applying said shuffled digitalized drive current signals to said second plurality of LEDs.

6. The LED printbar of claim 4 wherein said sensing means comprise

an up/down counter for counting a line of data from said current driver to form digital signals,

a scaler and a quantizer to scale and quantizing said digital signals, and

a shuffler to shuffle said digital signals before applying said shuffled digitalized drive current signals to said second plurality of LEDs.